DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1x.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-012664
Date Inspected: 17-Mar-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Job Site

CWI Name: Bonifacio Daquinag and William Lowis

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girder

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project. The following observations were noted;

1. OBG Lift 2W repair per American Bridge Fluor/Joint Venture (ABF/JV) Welding Repair Report WRR-201002-
001 Revision 0/ABF/JV NCR-004
2. OBG Lift 2W repair per American Bridge Fluor/Joint Venture (ABF/JV) NCR-002

1) The Quality Assurance Inspector (QAI) arrived at the ABF facilities at Pier 7 to observe repairs of components on OBG L2W. The QAI observed ABF personnel repairing a damaged section of the OBG Lift 2W Line W3. The QAI noted that the original plate has been cut out and the replacement plate being spliced into longitudinal connection plate, line W3, panel point 13. Upon arrival at job site, welder John Rosas with Identification number 1480 was noted flush grinding the horizontal and vertical butt joints. According to the Quality Control (QC) Inspector Bonifacio Daquinag Jr., the welding of the repair was completed yesterday but was not able to do the flush grinding. After flush grinding the weld reinforcement, Quality Assurance Inspector (QAI) had noted the Quality Control (QC) Inspector Bonifacio Daquinag Jr. measuring the underfill on the weld joints. The QC had noted some few spots that were below the base metal surface so he instructed welder John Rosas to weld those areas. The QAI was informed that shielded metal arc welding (SMAW) with 3/32" E7018 electrodes will be used with Welding Procedure Specification (WPS) ABF-WPS-D15-1010 for the complete joint penetration (CJP) splice welds. The QAI made random observations of welding parameters and preheat temperature which were noted as

100 DC amps and a base metal temperature of 119°F. The QAI noted that the work in progress appeared to be generally conforming to the contract and repair specifications.

When all the underfills were welded, two ABF/JV welders, John Rosas and Al Mc Daniels were noted flush grinding the weld joints. After completing the flush grinding, QAI noted QC Inspector Bonifacio Daquinag Jr. performing visual inspection on the completely welded and flush ground weld joints. The QC inspector informed QAI that the weld repair was generally acceptable except that the bottom rat hole needs more grinding and some weld touch up on toe of the existing fillet weld due to excess grinding.

In spite of the outstanding rat hole to be ground and weld touch up on toe of existing weld, QC Inspector informed QAI that he will perform Magnetic Particle Testing (MT) and fix the rat hole and weld touch up later. The QC inspector was noted using a Parker Contour Electromagnetic Yoke. After completing the MT and found the weld repair acceptable, QC Inspector William Norris was noted performing Ultrasonic Testing (UT) on the CJP weld joints. During QC's UT, it was noted that he made a lot of markings on the base metal and informed QAI that those are defect/indications.

3. OBG Lift 2W repair per American Bridge Fluor/Joint Venture (ABF/JV) NCR-002. A clip plate welded on top of WT stiffener of bottom plate D of 2W OBG and bolted (2 pcs.) to the shear diaphragm plate was erroneously cut by one of the ABF/JV personnel thinking that it was a temporary attachment. Due to this mistake, ABF/JV has written an internal Non-Conformance Report ABF NCR-002. The ABF recommendation was to put back the plate using the same method as when it was initially welded.

QAI had noted ABF/JV welder Al Mc Daniels (I.D. 2690) performed the horizontal (2F) fillet welding of the above mentioned plate. The welder was using shielded metal arc welding (SMAW) with 1/8" E7018 H4R electrode implementing Welding Procedure Specification (WPS) ABF-D15-F1200. During welding, the welder was noted preheating the plates prior welding and ABF QC William Norris was also noted monitoring the welding parameters. The clip plate was welded both sides and the completed weld appeared to be generally conforming to the contract specifications.

WELDING INSPECTION REPORT

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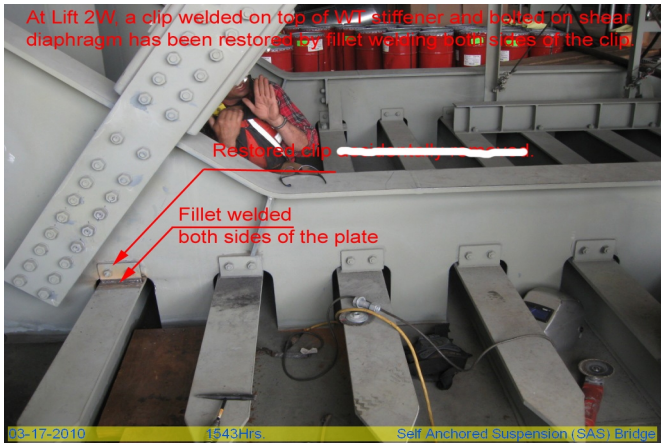

Summary of Conversations:

As stated above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Mohammad Fatemi (916) 227-5298, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer